

## **REMARKS**

In the Official Action mailed on **29 January 2007**, the Examiner reviewed claims 1-4, 7-14, 17-24, and 27-33. Claims 1-4, 7-14, 17-24, and 27-33 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ouchi (USPub 2003/0039455, hereinafter “Ouchi”) in view of Robertson et al (USPN 5,857,042 hereinafter “Robertson”).

### **Rejections under 35 U.S.C. §103(a)**

Independent claims 1, 11, and 21 were rejected as being unpatentable over Ouchi in view of Robertson. Applicant respectfully points out that the present invention teaches passing an optical signal through **annuli located within metal layers on a first semiconductor die** to focus the optical signal onto a second semiconductor die (see FIGs. 5-6; and paragraph [0041]-[0042] of the instant application). The benefit of locating the annuli within the metal layers of the semiconductor die is that the annuli are fabricated on the same die, thus obviating the need to align external annuli with the die.

There is nothing in Ouchi or Robinson, either express or implied, which suggests passing an optical signal through annuli located within metal layers on a first semiconductor die to focus the optical signal onto a second semiconductor die.

Furthermore, the official notice that Examiner asserts in rejecting claims 2 and 12 of the instant application is not properly based upon common knowledge (see paragraph 9 of the Office Action Letter dated January 29, 2007). Applicant respectfully points out that Applicant claims **annuli located within metal layers of a first semiconductor die** to focus optical signals onto a second semiconductor die. Although discrete annuli (i.e., not located on a semiconductor die) may be well-known in the prior art, using annuli that are located within metal layers on a semiconductor die is not well-known. Even if a macro-sized structure is

well-known (or common knowledge) in the prior art, an equivalent micro-sized (or nano-sized structure) may not be well-known or common knowledge. For example, the equivalent micro-sized (or nano-sized structure) may not be able to be produced using existing techniques. In another example, although mirrors are known to be able to reflect light, prior to the invention of on-chip micro-mirrors, redirecting light using structures on a semiconductor chip was not well-known (or common knowledge). In these cases, as in the case of annuli located within metal layers of the semiconductor die, it would be improper to assert official notice that the structures are well-known (or common knowledge) in the prior art, and that it would have been obvious to locate these structures on a semiconductor die.

Accordingly, Applicant respectfully requests that Examiner to produce documentary evidence that annuli located within metal layers of the semiconductor die are well-known or common knowledge in the prior art.

MPEP 2144.03.

In absence of this documentary evidence, Applicant respectfully submits that independent claims 1, 11, and 21 as presented are in condition for allowance. Applicant also submits that claims 2-4, 7-10, and 31, which depend upon claim 1, claims 12-14, 17-20, and 32, which depend upon claim 11, and claims 22-24, 27-30, and, 33 which depend upon claim 21, are for the same reasons in condition for allowance and for reasons of the unique combinations recited in such claims.

## **CONCLUSION**

It is submitted that the present application is presently in form for allowance. Such action is respectfully requested.

Respectfully submitted,

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